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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,156	09/18/2003	William Lin	07844-610001	6282
21876 7590 04/05/2007 FISH & RICHARDSON P.C. P.O. Box 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER NGUYEN, MAIKHANH	
			ART UNIT 2176	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			04/05/2007	
			DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/665,156	LIN, WILLIAM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Maikhanh Nguyen	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-19, and 21-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is responsive to communications: Amendment filed 01/19/2007 to the original application filed 09/18/2003.

Claims 1-4, 6-19, and 21-32 are presented for examination. Claims 5 and 20 have been canceled. Claims 31-32 have been added. Claims 1, 10, 13, 16, 25, and 28 are independent claims.

### **Request Continuation for Examination**

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/19/2007 has been entered.

### Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

*(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language; or "* (Emphasis added.)

Claims 1-4, 6-8, 10-19, 21-23, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by **Jones et al.** (US 2004/0006744, filed 06/2002).

#### As to claims 10 and 25:

Jones teaches a computer-implemented method and a computer program for correcting *(e.g., changes)* a structured electronic document *(e.g. XML document)* [See the Abstract], comprising:

- identifying a structured aspect of the structured electronic document that fails to conform to rules of a markup language format *(e.g., Error data 235 includes data returned to the word-processor 120 from XML validation engine 225 when an error has occurred with relation to elements validated by XML validation engine 225. Error data 235 may also include information for displaying a notification of*

*the errors by word-processor 120 ... four separate types of errors are reported by word-processor 120 when an error results from validation. The four types of errors include a location error, an invalid contents error, a missing contents error, and an invalid attribute error; see ¶ 0034);*

- *suggesting one or more changes to a user which would correct the identified structured aspect (e.g., Error data 235 may also include further information related to the error, such as suggestions about how to possibly rectify the error which may be displayed to the user; see ¶ 0034);*
- *receiving user input selecting a change of the suggested changes [e.g., display indicators may be used within parallel tree 420 to indicate the presence of an error associated with a node. According to the example shown, right-clicking on the underlined element(s) (e.g., error element 432) within the XML document 410 produces error display 430 (e.g., a right-click menu). Error display 430 lists detailed information regarding the error, such as the error type. Error display 430 may also include suggested actions for the user in attempting to rectify the error. The suggested actions may be interactive, allowing a user to pick from a list of possible solutions to the presence of the error; see ¶ 0040].*
- *applying the selected change to the structured electronic document (e.g., hovering over icon 442 may display other information to the user, such as tooltip 440. A*

*"tooltip" ... provides a user with additional information. For example, the tooltip shown provides textual notification that "Zip cannot be inside Street" ... either icon 442 or error element 432 may be selected or hovered over to display either error display 430 or tooltip 440. An exemplary process related to displaying the indicators of the error within XML document 410 and parallel tree 420 is described in the discussion of FIG. 8; see ¶ 0041).*

**As to claim 11:**

Jones teaches requesting information from a user about the identified structural aspect [e.g., *The set of tags and attributes defined by the schema for word-processor 120 may define the format of an XML document to such an extent that it is referred to as its own markup language, a Word-Processor Mark-up Language (native XML). The native XML is supported by word-processor 120 and may adhere to the rules of other markup languages while creating further rules of its own. The native XML provides a markup language that includes rich display information normally associated with word processing, such as textual formatting (e.g., bold, italics, underlining), paragraph formatting (e.g., line spacing, justification, and the like), tabular formatting (e.g., table rows and columns), and the like. The native XML may then be used in conjunction with a user-defined schema that adds more substantive structure to the document; see ¶ 0030]* and based on input received in response to the request, suggesting to the user one or more changes that would correct the identified structural aspect (e.g., *an error display is presented to the user in response to the right-click that gives detail information on the*

*error that occurred and instruction for rectifying the error ...a determination is made whether the user is hovering the mouse pointer over an icon in the parallel tree. If the user decides not to hover the mouse pointer over the error, processing moves to block 808 where processing returns to block 509 of process 500 shown in FIG. 5; see ¶¶ 0067-0069).*

**As to claim 12:**

It includes the same limitation as claim 10 above is rejected the same rationale.

Additionally, Jones teaches bringing the entire structured electronic document into conformance with the rules [e.g., *The set of tags and attributes defined by the schema for word-processor 120 may define the format of an XML document to such an extent that it is referred to as its own markup language, a Word-Processor Mark-up Language (native XML). The native XML is supported by word-processor 120 and may adhere to the rules of other markup languages while creating further rules of its own. The native XML provides a markup language that includes rich display information normally associated with word processing, such as textual formatting (e.g., bold, italics, underlining), paragraph formatting (e.g., line spacing, justification, and the like), tabular formatting (e.g., table rows and columns), and the like. The native XML may then be used in conjunction with a user-defined schema that adds more substantive structure to the document; see ¶ 0030].*

**As to claims 1 and 16:**

The rejections of claims 10 and 25 above are incorporated herein in full. Additionally, Jones teaches the rules including one or more rules deduced from the structure of the structure electronic document [*e.g., The set of tags and attributes defined by the schema for word-processor 120 may define the format of an XML document to such an extent that it is referred to as its own markup language, a Word-Processor Mark-up Language (native XML). The native XML is supported by word-processor 120 and may adhere to the rules of other markup languages while creating further rules of its own. The native XML provides a markup language that includes rich display information normally associated with word processing, such as textual formatting (e.g., bold, italics, underlining), paragraph formatting (e.g., line spacing, justification, and the like), tabular formatting (e.g., table rows and columns), and the like. The native XML may then be used in conjunction with a user-defined schema that adds more substantive structure to the document; see ¶ 0030*].

**As to claims 2 and 17:**

Brown teaches identifying, among other things, mismatched structural aspect of the structured electronic document (*e.g., a missing contents error; see ¶ 0034*).

**As to claims 3 and 18:**

Brown teaches the rules include one or more rules stored separately from and referred to in the structured electronic document (*e.g., e.g., a schema for use with XML documents associated with word-processor 120 ... define the format of an XML document to such an extent that it is referred to as its own markup language ... adhere to the rules of other markup languages; see ¶ 0030*)).

**As to claims 4 and 19:**

Brown teaches the rules include one or more rules stored in the structured electronic document (*e.g., e.g., a schema for use with XML documents associated with word-processor 120 ... define the format of an XML document to such an extent that it is referred to as its own markup language ... adhere to the rules of other markup languages; see ¶ 0030*)).

**As to claims 6 and 21:**

Jones teaches the markup language format is an XML format (*e.g., XML document; see the Abstract*)).

**As to claims 7 and 22:**

Jones teaches the rules include one or more rules defined in an XML schema (*e.g., a schema for use with XML documents associated with word-processor 120 ... define the*

*format of an XML document to such an extent that it is referred to as its own markup language ... adhere to the rules of other markup languages; see ¶ 0030).*

**As to claims 8 and 23:**

Jones teaches the rules include one or more rules defined in an XML DTD (e.g., (e.g., a schema for use with XML documents associated with word-processor 120 ... define the format of an XML document to such an extent that it is referred to as its own markup language ... adhere to the rules of other markup languages; see ¶ 0030).

**As to claims 26-27:**

Refer to the rejection of claims 11-12 above, respectively, for rejections.

**As to claims 13 and 28:**

The rejection of claim 1 above is incorporated herein in full. Additionally, Jones teaches recursively validating a parent element of the markup language document by: (i) validating attributes of the parent element; (ii) validating a content model of the parent element; and (iii) recursively validating one or more children of the parent element (e.g., *When validated, the non-native XML elements are examined as to whether they conform to non-native XML schema 215... a schema states what tags and attributes are used to describe content in an XML document, where each tag is allowed, what types of contents can appear within elements, and which elements can appear within other elements, ensuring that the documentation is structured the same way ... The XML validation*

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*engine 225 is a module that is configured to maintain an element tree and validate the element tree against some schema ... the XML validation engine 225 may be passed an object that defines an element tree, such as one that corresponds to elements within the XML document 210, a pointer to a schema, such as non-native XML schema 215, and possibly the content of one or more elements of the element tree. With this information, the XML validation engine 225 validates the element tree against the schema and reports any violations to the calling process; see ¶¶ 0031-34 and 0044-0052).*

**As to claim 14:**

Refer to the discussion of claim 6 above for rejection.

**As to claim 15:**

Jones teaches checking a root element against a DOCTYPE root tag specified in the rules associated with the XML document; and allowing a user to retag the root element using the DOCTYPE root tag (*see ¶¶ 0050-0054, 0060-0061*).

**As to claims 17-23:**

Refer to the rejection of claims 2-8 above, respectively, for rejections.

**As to claims 29-30:**

Refer to the rejection of claims 14-15 above, respectively, for rejections.

### Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

*This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).*

Claims 9, 24, 31, and 32 are rejected under U.S.C. 103(a) as being unpatentable over

**Jones et al.** (US 2004/0006744, filed 06/2002) in view of **Kuo et al.** (US 2004/0268304, filed 06/2002).

**As to claims 9 and 24:**

Kuo teaches suggesting a plurality of changes to the user in an order determined by preferred user preferences (*e.g., the XML editor of this invention generates hints for "optional elements" or "optional element slots" upon the user's requests. According to the XML editor of this invention, when a user wishes to add an element spontaneously, it is not necessary to point to the exact position for insertion. The user selects an existing element as a reference position (e.g. highlighted) and asks the system to generate hints*

*for all possible elements at positions close to the reference position. These hints are referred to as "optional element slots" and the elements to be filled into the slots "optional elements; see ¶ 0102).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Jones with Kuo because Kou's teaching would have provided the enhanced capability for enabling validation of an extensible markup language (XML) document and reporting of schema violations in real time as a user edits the document

**As to claims 31 and 32:**

Kuo teaches suggesting a plurality of changes includes suggesting changes to the user in an order determined by a calculated statistical likelihood of correctness (see ¶¶ 0049-0053).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Jones with Kuo because Kou's teaching would have provided the enhanced capability for enabling validation of an extensible markup language (XML) document and reporting of schema violations in real time as a user edits the document

### **Response to Arguments**

5. Applicants' arguments filed 01/19/2007 have been fully considered but are moot in view of the new ground(s) rejection.

### **Conclusion**

6. The prior art made of record, listed on PTO 892 provided to Applicant is considered to have relevancy to the claimed invention. Applicant should review each identified reference carefully before responding to this office action to properly advance the case in light of the prior art.

### **Contact information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhanh Nguyen whose telephone number is (571) 272-4093. The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached at (571) 272-4136.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

Commissioner for patents

P O Box 1450

Alexandria, VA 22313-1450

MN

*William L. Bashore*  
**WILLIAM BASHORE**  
**PRIMARY EXAMINER**